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PTO/SB/21 (05-03)

Approved for use through 04/30/2003. OMB 0651-0031

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| TRANSMITTAL FORM (to be used for all correspondence after initial filing) | Application Number | 09/898,745 |
| | Filing Date | July 3, 2001 |
| | First Named Inventor | R. Davis |
| | Group Art Unit | 1637 |
| | Examiner Name | T. Strzelecka |
| Total Number of Pages in This Submission | Attorney Docket Number | STAN-153 |
| ENCLOSURES (check all that apply) | | |
| <input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Documents <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) Remarks | <input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): 1) Petition for Certificate of Correction (2 pgs.) 2) Certificate of Correction (1 pg.) 3) Copy of Columns 27 & 28 of U.S. Patent No. 6,743,583 (1 pg.) 4) Supplemental Amendment as filed on December 22, 2003 5) Return Postcard |
| SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT | | |
| Signing Attorney/Agent (Reg. No.) | EDWARD J. BABA (REG. NO. 52,581) BOZICEVIC, FIELD & FRANCIS LLP | |
| Signature | | |
| Date | June 22, 2004 | |

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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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2 JUL 2004



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|--|------------------------|---|
| PETITION FOR CERTIFICATE OF CORRECTION UNDER 37 C.F.R. § 1.322 FOR PATENT AND TRADEMARK OFFICE ERROR Address to: Assistant Commissioner for Patents Washington, D.C. 20231 | Attorney Docket Number | STAN-153 |
| | First Named Inventor | Ronald W. Davis |
| | Application Number | 09/898,745 |
| | Filing Date | July 3, 2001 |
| | Patent Number | 6,743,583 |
| | Issue Date | June 1, 2004 |
| | Title | IDENTIFICATION OF DRUG AND DRUG TARGETS BY DETECTION OF STRESS RESPONSE |

Sir:

Applicants petition under 37 C.F.R. § 1.322 for a Certificate of Correction to correct errors in the claims for the above-identified patent due to Patent and Trademark Office error.

Transmitted herewith for filing is a Certificate of Correction for the above-identified patent. Please make the following corrections to Claims 1, 4, and 6.

In Claim 1, column 27, lines 45 to 47, please remove the words -- wherein the stress response gene by the host cell in response to said contacting,-- after the word "contacting" and before the word "wherein".

In Claim 4, column 28, line 31, please replace the word "coil" with the word -- cell --.

In Claim 6, column 28, line 45, please replace the word "the" with the word -- a --.

In Claim 6, column 28, line 45, please add the word -- signal -- after the word "detectable" and before the word "for".


Enclosed is a copy of the Amendment and Response filed on December 22, 2003, showing the correct form of the Claims. Also enclosed, is a copy of the last page of the issued patent showing the incorrect language of the claims that resulted from Patent and Trademark Office error.

USSN: 09/898,745
Atty Dkt: STAN-153

It is believed that no fee is due since the error was made by the Patent and Trademark Office. However, the Commissioner is hereby authorized to charge any fees under 37 C.F.R. § 1.20 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-0815.

Respectfully submitted,
BOZICEVIC, FIELD & FRANCIS LLP

Date: June 22, 2004

By: 
Edward J. Baba
Registration No. 52,581

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F:\DOCUMENT\STAN (Stanford)\153\Certificate of Correction Petition STAN-153.rtf

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

PATENT NO. : 6,743,583
DATED : June 1, 2004
INVENTOR(S) : Ronald W. Davis et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Claim 1, column 27, lines 45 to 47: the words -- wherein the stress response gene by the host cell in response to said contacting, -- following the word "contacting" and preceding the word "wherein" should be removed.

Claim 4, column 28, line 31: "coil" should be -- cell --.

Claim 6, column 28, line 45: "the" should be -- a --.

Claim 6, column 28, line 45: -- signal -- should be added following the word "detectable" and preceding the word "for".

MAILING ADDRESS OF SENDER:

BOZICEVIC, FIELD & FRANCIS LLP
200 Middlefield Road, Suite 200
Menlo Park, CA 94025

PATENT NO: 6,743,583

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2 JUL 2004

(positive values) or the fold repression (negative values) relative to that of wildtype expression in the absence of drug.

TABLE 9

| ORF Name | Gene Name | Wild- type no drug | Wildtype tunicamycin 0.6 μ M | alg7 heterozygote tunicamycin 0.6 μ M | ymr007w heterozygote tunicamycin 0.6 μ M |
|-------------|--------------|-----------------------------|--|--|---|
| YBR072W | HSP26 | 1 | 17 | -2.5 | 1.4 |
| YGR043C | | 1 | 17 | -3.5 | -3.5 |
| YHR096C | HXT5 | 1 | 50 | 1 | 1 |
| YLR121C | YPS3 | 1 | 15 | -10 | -10 |
| YMR107W | | 1 | 40 | 1 | 1 |

As can be seen from the results in the above table, neither the alg7 strain nor the ymr007 strain showed any significant induction in stress response. In contrast, a robust stress response was induced in a wildtype strain. This observation supports the assertion that drug sensitive strains will not illicit the normal healthy stress response in the presence of drug.

All publications and patent applications cited in this specification are herein incorporated by reference as if each individual publication or patent application were specifically and individually indicated to be incorporated by reference. The citation of any publication is for its disclosure prior to the filing date and should not be construed as an admission that the present invention is not entitled to antedate such publication by virtue of prior invention.

Although the foregoing invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it will be readily apparent to those of ordinary skill in the art in light of the teachings of this invention that certain changes and modifications may be made thereto without departing from the spirit or scope of the appended claims.

What is claimed is:

1. A method for identifying a bioactive compound, the method comprising the steps of:

contacting a yeast host cell containing a heterozygous deletion in a target sequence with a candidate bioactive compound; and

detecting expression of a stress response gene by the host cell in response to said contacting, wherein the stress response gene by the host cell in response to said contacting, wherein the stress response gene is at least one of HSP26, HSP12, HSP42, HSP78, HSP82, YBR072W, YBL049W, YFL030W, YGR043C, YHR096C, YLR142W, YMR081C, YMR107W, YNL194C, YJL144W, YLR080W, YLR178C or YMR090W;

wherein detection of no significant increase in expression of the stress response gene as compared to expression of the stress response gene in a control host cell

indicates that the candidate bioactive compound has activity as a drug and that the host cell having the heterozygous deletion is sensitive to the drug activity of the compound.

2. The method of claim 1, wherein the yeast host cell comprises a stress response gene reporter construct, wherein expression of the stress response gene reporter construct is indicative of expression of the stress response gene in the yeast host cell.

3. The method of claim 1, wherein at least two more yeast host cells, each having a heterozygous deletion in a different target sequence, are contacted with a candidate bioactive compound, and wherein expression of a reporter gene construct in each yeast host cell provides for a unique detectable signal for detection of stress response gene expression.

4. A method for identifying a target gene product of a bioactive compound, the method comprising the steps of:

contacting a yeast host cell with a bioactive compound, wherein the host cell is altered in expression of a target gene product; and

detecting a level of expression of a stress response gene by the host cell in response to said contacting, wherein the stress response gene is at least one of HSP26, HSP12, HSP42, HSP78, HSP82, YBR072W, YBL049W, YFL030W, YGR043C, YHR096C, YLR142W, YMR081C, YMR107W, YNL194C, YJL144W, YLR080W, YLR178C or YMR090W;

wherein a lower or undetectable level of expression of the stress response gene in the host cell relative to a level of expression in a wildtype host cell exposed to the bioactive compound indicates that the host cell is altered in expression for a target gene product that is involved in mediating resistance or sensitivity to the bioactive compound.

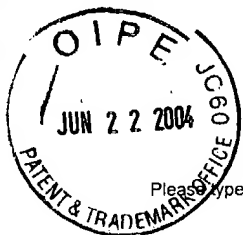
5. The method of claim 4, wherein the yeast host cell comprises a stress response gene reporter construct, wherein expression of the stress response gene reporter construct is indicative of expression of the stress response gene in the yeast host cell.

6. The method of claim 4, wherein at least two or more yeast host cells containing a heterozygous deletion strains are contacted with the bioactive compound, and wherein expression of the reporter gene construct in each yeast host cell provides for a unique detectable for detection of stress response gene expression.

7. The method of claim 3, wherein the yeast host cells are contacted with the candidate bioactive compound in a single culture.

8. The method of claim 6, wherein the yeast host cells are contacted with the bioactive compound drug in a single culture.

* * * * *



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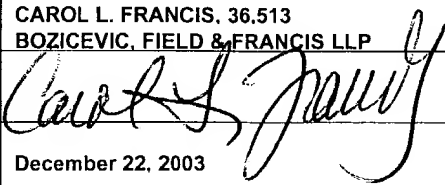
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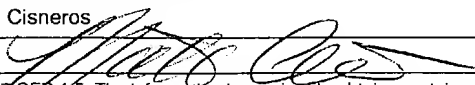
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| TRANSMITTAL FORM (to be used for all correspondence after initial filing) | | Application Number | 09/898,745 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|------------------------|----------|---|---|---|---------------------------------------|-------------------------------------|---|--|---|--|--------------------------------------|-----------------------------------|--|--|---|--|--|---|---|--|--|--|---|---|--|---|--|--|---|---------|--|--|--|--|
| | | Filing Date | July 3, 2001 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Confirmation Number | 3662 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | First Named Inventor | DAVIS, RONALD W. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Group Art Unit | 1637 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Examiner Name | STRZELECKA, TERESA E. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Number of Pages in This Submission | | 7 | Attorney Docket Number | STAN-153 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENCLOSURES (check all that apply) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Signing Attorney/Agent (Reg. No.) | CAROL L. FRANCIS, 36.513 BOZICEVIC, FIELD & FRANCIS LLP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Signature |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date | December 22, 2003 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Typed or Printed Name | | Martha Cisneros | |
| Signature |  | Date | 12/22/03 |

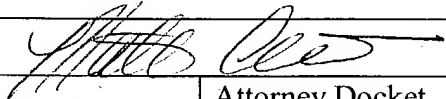
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| | | | |
|---|---|--|----------|
| Typed or Printed Name | Martha Cisneros | | |
| Signature |  | Date | 12/22/03 |
| SUPPLEMENTAL AMENDMENT Address to: Mail Stop: AF Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 | Attorney Docket Confirmation No. | STAN-153 3662 | |
| | First Named Inventor | Ronald W. Davis | |
| | Application Number | 09/898,745 | |
| | Filing Date | July 3, 2001 | |
| | Group Art Unit | 1637 | |
| | Examiner Name | Teresa E. Strzelecka | |
| | Title | "Identification of Drugs and Drug Targets by Detection of the Stress Response" | |

Dear Sir:

This amendment is supplemental to the amendment filed July 16, 2003 which was responsive to the Final Office Action dated April 16, 2003. Because the prior amendment was fully responsive to the last action, applicants submit that no extensions of time are required.

In view of the amendments to the claims and the remarks put forth below, reconsideration and allowance are respectfully requested.

AMENDMENTS

In the Claims

1. **(Currently Amended)** A method for identifying a bioactive compound, the method comprising the steps of:

contacting a yeast host cell containing a heterozygous deletion in a target sequence with a candidate bioactive compound; and

detecting expression of a stress response gene by the host cell in response to said contacting, **wherein the stress response gene is at least one of HSP26, HSP12, HSP42, HSP78, HSP82, YBR072W, YBL049W, YFL030W, YGR043C, YHR096C, YLR142W, YMR081C, YMR107W, YNL194C, YJL144W, YLR080W, YLR178C or YMR090W;**

wherein detection of no significant increase in expression of the stress response gene as compared to expression of the stress response gene in a control host cell indicates that the candidate bioactive compound has activity as a drug and that the host cell having the heterozygous deletion is sensitive to the drug activity of the compound.

2.-3. **(Cancelled)**

4. **(Currently Amended)** The method of claim 1, wherein the yeast host cell comprises a stress response gene reporter construct, wherein expression of the stress response gene reporter construct is indicative of **expression of the stress response gene** ~~a stress response~~ in the yeast host cell.

5. – 6. **(Cancelled)**

7. **(Currently Amended)** The method of claim 1, wherein at least two or more yeast host cells, each having a heterozygous deletion in a different target sequence, are contacted with a candidate **bioactive compound** drug, and wherein expression of a reporter gene construct in each yeast host cell provides for a unique detectable signal for detection of ~~reporter~~ **stress response** gene expression.

8. – 10. (Cancelled)

11. (Currently Amended) A method for identifying a target gene product of a bioactive compound, the method comprising the steps of:

contacting a yeast host cell with a bioactive compound, wherein the host cell is altered in expression of a target gene product; and

detecting a level of expression of a stress response gene by the host cell in response to said contacting, wherein the stress response gene is at least one of HSP26, HSP12, HSP42, HSP78, HSP82, YBR072W, YBL049W, YFL030W, YGR043C, YHR096C, YLR142W, YMR081C, YMR107W, YNL194C, YJL144W, YLR080W, YLR178C or YMR090W;

wherein a lower or undetectable level of expression of the stress response gene in the host cell relative to a level of expression in a wildtype host cell exposed to the bioactive compound indicates that the host cell is altered in expression for a target gene product that is involved in mediating resistance or sensitivity to the bioactive compound.

12. (Currently Amended) The method of claim 11, wherein the yeast host cell comprises a stress response gene reporter construct, wherein expression of the stress response gene reporter construct is indicative of expression of the stress response gene a stress response in the yeast host cell.

13. (Currently Amended) The method of claim 11, wherein at least two or more yeast host cells containing a heterozygous deletion strains are contacted with the bioactive compound drug, and wherein expression of a the reporter gene construct in each yeast host cell provides for a unique detectable signal for detection of reporter stress response gene expression.

14. - 20 (Cancelled)

21 (Currently Amended) The method of claim 7, wherein the yeast host cells are contacted with the candidate bioactive compound drug in a single culture.

22. **(Currently Amended)** The method of claim 13, wherein the yeast host cells are contacted with the bioactive compound ~~candidate drug~~ in a single culture.

REMARKS UNDER 37 CFR § 1.111

Claims 1, 4, 7, 11-13 and 21-22 are pending after entry of the amendments set forth herein.

Claims 2, 3, 5, 6, 8-10, 14-20 are cancelled.

Claims 1, 4, 7, 11-13 and 21-22 are amended.

Support for the amendments to claims 1 and 11 is found in, for example, original claims 9., 10, 15 and 16, well as Tables 7 and 8 of the specification.

Claims 4, 7, 12-13 and 21-22 are amended for further clarity and to provide for antecedent basis.

Applicants respectfully request reconsideration of the application in view of the amendments and remarks made herein.

No new matter has been added.

Interview Summary

Applicants extend their gratitude to Examiner Strzelecka for contacting the undersigned and conducting telephonic interviews over the course of December 17 – 19, 2003. Amendments to place the claims in form for allowance were discussed, as were claims that could be pursued in a continuing application. Specifically, the Examiner suggested pursuing claims that recited detecting expression of a gene differentially expressed in the presence of a drug compared to the absence of a drug, with dependent claims reciting that the differentially expressed gene is a stress response gene. Applicants thank the Examiner for the generosity of her time, and her helpful suggestions, which applicants intend to pursue.

The amendments made herein reflect those suggested by the Examiner. Thus, applicants respectfully submit that the claims are now in form for allowance, early notice of which is respectfully requested.

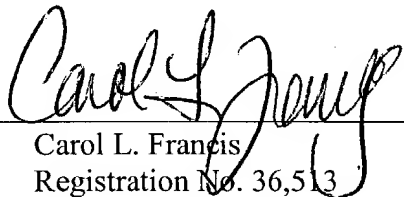
Conclusion

Applicant submits that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number STAN-153.

Respectfully submitted,
BOZICEVIC, FIELD & FRANCIS LLP

Date: Dec 22, 2003

By: 
Carol L. Francis
Registration No. 36,513

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200 Middlefield Road, Suite 200
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Telephone: (650) 327-3400
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| Filing Date | July 3, 2001 |
| Confirmation Number | 3662 |
| First Named Inventor | DAVIS, RONALD W. |
| Group Art Unit | 1637 |
| Inventor Name | STRZELECKA, TERESA E. |
| Attorney Docket Number | STAN-153 |

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